

# Esprit Compact Bispectral PTZ

2 MP

QVGA

VGA

Mission-critical industries require highly-reliable security in installations that are often located in demanding and remote environments. They must ensure round-the-clock security for their wide perimeters, necessitating robust video security systems that can flawlessly operate in all environmental, lighting and weather conditions. Get a complete picture of the landscape with the Esprit Compact Bispectral that combines a visual and a thermal camera into a single device. The visual camera recognizes and identifies a target, while the thermal camera achieves greater detection accuracy, even in adverse weather and lighting conditions. Both cameras are perfectly aligned with the movements of the PTZ, providing an efficient 360-degree solution to safeguard perimeters and borders, critical infrastructures, traffic management, railway and beyond.



## Features

### VISUAL CAMERA

Get clear images in most weather and lighting conditions with 2 MP resolution, Low Light Performance and true Wide Dynamic Range. See afar in great detail with long-range zoom.

### EASY INSTALLATION

Simplify installation and maintenance processes by installing only one camera instead of two. The compact design of this camera facilitates its installation, particularly in remote areas.

### SUPERIOR DETECTION

Never miss a single detail with a camera that provides a thermal and a visual vision for better decision-making and reduced false alarm rates.

### H.264 AND H.265, SMART COMPRESSION

Retain high image quality and optimize compression levels to minimize bandwidth and storage needs.

\*ONVIF is a trademark of Onvif, Inc.

### THERMAL CAMERA

Detect heat signatures from a long distance with various resolutions, including QVGA and VGA, and choose from a variety of field of view options to cover wide areas.

### PELCO SMART ANALYTICS

Enhance object detection and classification and leverage your PTZ's full potential with auto-tracking for quicker, decisive responses.

### RUGGED FOR TOUGH CONDITIONS

Safe in extreme temperatures from -40°C to 60°C (-40°F to 140°F), plus IP66/67/68 weather rating and IK10 impact rating for maximum durability.

### ONVIF® COMPLIANT\*

ONVIF Profile S, T, G, and M conformance for easy integration with any third-party VMS.

**PELCO®**

# Specifications

Thermal - Image Performance		QVGA	VGA
Image Sensor		320 x 256 Uncooled VOx Microbolometer	640 x 512 Uncooled VOx Microbolometer
Pixel Pitch		12µm	
Spectral Range		8µm to 14µm	
Aspect Ratio		5:4	
Image Rate		Up to 30 fps (~1 models up to 8.6 fps)	
Dynamic Range		-40°C to 225°C (-40°F to 437°F) [may vary based on operating temperature]	
Resolution Scaling		320 x 256, can be scaled up to 640 x 512	640 x 512, can be scaled down to 320 x 256
3D Noise Reduction Filter		Yes	
Sensitivity		NETD ≤50 mK (NETD ≤40 mK when Frame Averager feature is enabled)	
Thermal Palettes*		White Hot, Black Hot, Rainbow, RainHC, IronBow, Lava, Artic, GlowBow, GradedFire	
Image Uniformity Optimization		Automatic Flat Field Correction (FFC) - Thermal and Temporal	

\*Pelco Smart Analytics powered by Motorola Solutions.

Thermal - Lens	QVGA		VGA	
Lens	6.3 mm	18 mm	8.7 mm	24.4 mm
Horizontal field of view	34°	12°	50°	18°
Vertical field of view	27.2°	9.6°	37.5°	13.5°
F-number	F/1.01	F/1.04	F/1.01	F/1.00
Personal (detection / recognition / identification)	131m / 33m / 20m	381m / 95m / 59m	172m / 43m / 26m	505m / 126m / 78m
Car (detection / recognition / identification)	608m / 152m / 94m	1753m / 438m / 270m	867m / 217m / 133m	2506m / 627m / 386m

\*Person - Car detection according to "Johnson Criteria".

Visible - Image Performance		2.0 MP
Image Sensor		1/2.8" progressive scan CMOS
Active Pixels (H x V)		1937 (H) × 1097 (V)
Imaging Area (H x V)		5.568 mm (H) × 3.132 mm (V); 0.219 " (H) × 0.123 " (V)
Minimum Illumination		0.03 lux (F/1.6) in color mode; 0.02 lux (F/1.6) in monochrome
Dynamic Range		120 dB
Image Rate		Up to 60 fps
Aspect Ratio (Resolution Scaling)		Down to (16:9) 384×216 or (5:4) 320×256
Signal Noise (S/N) Ratio		More than 50 dB
Lens		4.25 to 170 mm, F/1.6 – F/4.95, autofocus
Angle of View	Horizontal	66.35° - 1.9°
	Vertical	39.99° - 1.11°

<b>Visible - Image Performance</b>	<b>2.0 MP</b>
Zoom	Up to 40x
3D Noise Reduction Filter	Yes

<b>Visible - Image Control</b>	<b>2.0 MP</b>
Motion Detection	Pixel motion: Selectable sensitivity and threshold. Classified object detection
Electronic Shutter Control	Automatic, Manual (1/1 to 1/10,000 sec)
Iris Control	Automatic, Open, Closed
Day/Night Control	Automatic, Manual
Flicker Control	60 Hz, 50 Hz
White Balance	Automatic, Manual
Backlight Compensation	On/Off
Privacy Zones	3D, up to 64 zones
Digital Zoom	12X
Electronic Image Stabilization	Yes
Digital Defog	Adjustable/Off

<b>Common - Image Control</b>	
Video Compression	H.264 and H.265 Pelco Smart Compression, Motion JPEG
Streaming	Multi-stream H.264, Multi-stream H.265, Motion JPEG
Presets	500 named presets
Tours	10 named tours

<b>Network</b>	
Network	100BASE-TX
Cabling Type	CAT5e/CAT6 shielded (STP) Ethernet cable is required to fully comply with EMC regulatory standards
Connector	RJ-45
ONVIF	ONVIF compliance Profile G, Profile M, Profile S, and Profile T ( <a href="http://www.onvif.org">www.onvif.org</a> )
Security	Password protection, HTTPS encryption, digest authentication, WS authentication, user access log, 802.1x port based authentication. Signed and encrypted firmware. FIPS 140-2 Level 3 (NXP TPM).
Protocols	IPv6, IPv4, HTTP, HTTPS, SOAP, DNS, NTP, RTSP, RTCP, RTP, TCP, UDP, IGMPv3, ICMP, DHCP, Zeroconf, HSTS, NTCIP
Streaming Protocols	RTP/UDP, RTP/UDP multicast, RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP, RTP/RTSP/HTTPS/TCP, HTTP, SRTP
Device Management Protocols	SNMP v2c, SNMP v3

## Peripherals

Audio Input/Output	None
External I/O Terminals	2 Alarm In, 2 Alarm Out
Onboard Storage	MicroSD/microSDHC/microSDXC slot – video speed class card required. Class V10 or better recommended.

## Mechanical

Dimensions (Ø×H)	Ø240 mm × 406 mm; Ø9.45" × 16.0"
Weight	7.4 kg; 16.3 lb
Glass Window	6 mm thick (0.24")
Germanium Window	<ul style="list-style-type: none"> <li>• Thick: 1.5mm (0.06in)</li> <li>• Scratch-resistant treatment (Hard Carbon Coating - DLC)</li> <li>• Antireflection treatment</li> <li>• Spectral range: from 7.5µm up to 14µm</li> <li>• Medium transmittance (from 7.5µm up to 11.5µm): 91.2%</li> <li>• Medium transmittance (from 11.5µm up to 14µm): 80.9%</li> </ul>
Body	Aluminum and technopolymer
Housing	Pendant and pedestal mount
Finish	Epoxy-polyester powder painted, close to RAL9002
Tilt	Upright: -90° to +90°; Inverted: -40° to +90° Up to 250°/second
Pan	360°, endless, up to 250°/second
Horizontal speed (variable)	from 0.1°/s up to 250°/s
Tilt speed (variable)	from 0.1°/s up to 250°/s
Accuracy of preset positions	±0.1°

## Electrical

Power Consumption	71 W max with 24 VDC aux power supply or 90 W PoE, 100 VA with 24 VAC aux power. UL rating as specified on the product label = 5A max	
Power Source	External Power	<ul style="list-style-type: none"> <li>• 24 VDC, 24 VAC 50/60 Hz</li> <li>• 57 VDC PoE+, 71 W max</li> </ul>
	PoE	90 W compatible with standard IEEE 802.3bt Class 8
Power Connector	2-wire terminal block, 18 AWG to 13 AWG	
RTC Battery Backup	None	

## Environmental

Operating Temperature	Continuous functioning: from -40°C (-40°F) up to +60°C (140°F).
Storage Temperature	-40 °C to +70 °C (-40 °F to 158 °F)

Environmental

Humidity	5% - 95% non-condensing
Housing Climate Control	Built-in heater and fan
Cold Start	Up to 120 minute startup delay at temperature lower than -10 °C (14 °F)
Wind Resistance	Sustained 230 km/h (143 mph)

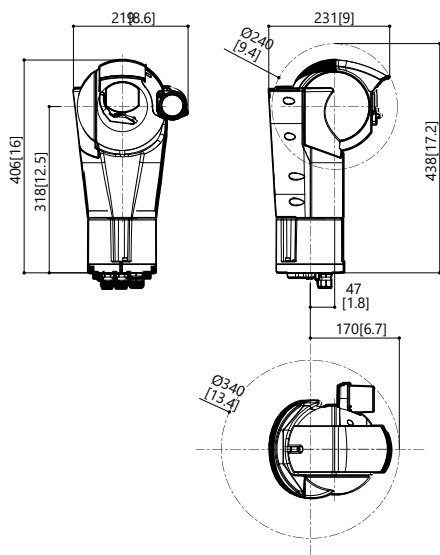
Certifications

Certifications/Directives	UL, cUL, CE, UKCA, ROHS, RCM, KC (BIS, NOM, pending)
Safety	UL 62368-1, CSA 62368-1, IEC/EN 62368-1
Environmental and Performance	UL/CSA/IEC/EN 62368-1 for outdoor enclosures, IEC 62262 IK10 Impact Rating (enclosure only), IEC 60529 IP66, IP67, IP68 Weather Rating, IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-30, Type 4X and 6P, Salt Spray ASTM B117, ISO 14993, MIL-STD-810-H (Method 501.7, 502.7, 503.7, 506.7, 509.7, 510.7, 521.4), MIL-STD 167-1A
Electromagnetic Emissions	FCC Part 15 Subpart B Class A, IC ICES-003 Class A, EN 55032 Class A, EN 61000-6-4, EN 61000-3-2, EN 61000-3-3, EN 50121-4
Electromagnetic Immunity	EN 55035, EN 50130-4, EN 50121-4
Warranty	5-year limited warranty. Extended warranty not available.
Railway Applications	Compliance to railway application standard: EN50121-4

Outline Dimensions

Esprit Compact Bispectral Camera

[X.XX]	INCHES
X.X	MM



# Ordering Information

## PTZ Cameras

Part Number	Visible				Thermal			
	MP	WDR	Lightcatcher Technology	Analytics At Home Position	Lens, Zoom	Sensor	HFOV, FL	Framerate
ESCE1-2X40V9-RLU-1	✓	✓	✓	✓	4.25 – 170 mm, 40x	VGA 640X512	50°, 8.7 mm	9Hz
ESCE1-2X40V24-RLU-1	✓	✓	✓	✓	4.25 – 170 mm, 40x	VGA 640X512	18°, 24 mm	9Hz
ESCE1-2X40Q6-RLU-1	✓	✓	✓	✓	4.25 – 170 mm, 40x	QVGA 320X256	34°, 6.3 mm	9Hz
ESCE1-2X40Q18-RLU-1	✓	✓	✓	✓	4.25 – 170 mm, 40x	QVGA 320X256	12°, 18 mm	9Hz
ESCE1-2X40V9-RLU	✓	✓	✓	✓	4.25 – 170 mm, 40x	VGA 640X512	50°, 8.7 mm	30Hz
ESCE1-2X40V24-RLU	✓	✓	✓	✓	4.25 – 170 mm, 40x	VGA 640X512	18°, 24 mm	30Hz
ESCE1-2X40Q6-RLU	✓	✓	✓	✓	4.25 – 170 mm, 40x	QVGA 320X256	34°, 6.3 mm	30Hz
ESCE1-2X40Q18-RLU	✓	✓	✓	✓	4.25 – 170 mm, 40x	QVGA 320X256	12°, 18 mm	30Hz

## PTZ Camera Accessories

Accessory	Description
UEBWAA	Wall bracket for Esprit Compact Bispectral
UEBP0AA	Parapet bracket for Esprit Compact Bispectral
UEBP4AA	Parapet bracket with quick connector RJ45 + four poles
UEBP7AA	Parapet bracket with quick connector RJ45 + seven poles
UEAP	Pole adaptor, stainless steel AISI 316L
UEAC	Corner adaptor, stainless steel AISI 316L
UEAW	Counter-plate, stainless steel AISI 316L
WASPT0V5L5M00	Washer 5l, 5m, 230Vac-24Vac-120Vac
WASPT0V23L11M00	Washer 23l, 11m, 230Vac-24Vac-120Vac
WASPT1V23L30M00	Washer 23l, 30m, water float, 230Vac
WASPT3V23L30M00	Washer 23l, 30m, water float, 120Vac
COMB100A	Comm. box, w PS & Switch, 220-230Vac
COMB200A	Comm. box, w PS & Switch, 24Vac
COMB300A	Comm. box, w PS & Switch, 120-127Vac
SURGEPR	Lightning surge prot. for Ethernet line

# Support

Learn more and find additional documentation at [pelco.com](https://pelco.com) or email [support@pelco.com](mailto:support@pelco.com) for specific product support.

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